

patients with precirrhotic primary hemochromatosis, serum iron levels may remain normal for decades. Serum ferritin values remain normal or only borderline elevated in such patients, though they are a sensitive and fairly accurate measure of body iron stores in other patients without complications.³ Though primary hemochromatosis is associated with certain human leukocyte antigens, particularly HLA-A3, B7 and B14, these are nonspecific and absent in a quarter of patients with primary hemochromatosis. Liver biopsy specimens furnish both morphologic information with qualitative assessment of iron content and distribution and quantitative measurement of tissue iron concentration.⁴ Morphologic study is helpful in patients with precirrhotic but frequently no distinction can be found between alcoholic cirrhosis and the late stage of cirrhotic primary hemochromatosis.

Correlation of chemical analysis of hepatic biopsy tissue with total body iron mobilizable by serial venesection to iron deficiency shows a rough linear proportionality, providing an estimation of total body iron stores within ± 4.4 grams (2 standard deviations [SD]).⁴ Measuring iron excretion in a 24-hour urine collection after intramuscular injection of deferoxamine provides a relatively gross indication of body stores. Measurement of total body iron chelatable by diethylenetriaminepentaacetic acid (DTPA) by measuring both iron and radioiron concentrations in a six-hour urine collection after intravenous injection of ⁵⁹Fe-DTPA provides a noninvasive and relatively accurate measurement of mobilizable storage iron. Correlation of total body DTPA-chelatable iron with total body iron mobilizable by serial venesection to iron deficiency shows a linear proportionality, providing an estimation of total body iron stores within ± 1.8 grams (2 SD) and 1.2 grams in the critical 0- to 10-gram range.^{5,6} Accuracy is required in the 0- to 10-gram range because patients with alcoholic cirrhosis and secondary hemosiderosis rarely have more than 5 grams of iron, while cirrhosis rarely develops in patients with primary hemochromatosis until iron stores exceed 10 grams. The presence of more than 7 grams of iron in a patient who has not received multiple transfusions or prolonged parenteral or oral administration of iron and in whom increased dietary iron over a long term or chronic increased erythropoiesis (or both) are ruled out is diagnostic of primary hemochromatosis.

Early diagnosis of primary hemochromatosis in the precirrhotic stage prevents progression of disease when followed by appropriate venesection treatment and maintenance. Systemic venesection of 500 to 1,000 ml of whole blood per week until mild iron deficiency results usually will prevent or arrest development of the disease with striking symptomatic improvement. Measurement of DTPA-chelatable iron is noninvasive and both sensitive and specific for iron overload. In conjunction with the clinical history and other laboratory tests, the measurement can accurately differentiate various iron overload conditions and be a guide for both therapeutic venesection and maintenance prophylactic venesection. The DTPA chelation study can also identify those relatives of homozygous persons who also are homozygous and require prophylactic and maintenance venesection. Human leukocyte antigen typing of relatives identifies their risk while the DTPA iron chelation study identifies those in whom the risk has become a physical certainty. Simultaneously measuring both serum ferritin concentration and transferrin saturation is also useful in screening relatives of homozygous subjects.² Patients with secondary hemochromatosis require treatment of the primary condition. Venesection also is beneficial and

can be implemented in all but patients requiring blood transfusion and patients who have intramedullary hemolysis and lack significant reticulocytosis.

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Needed Clout for Patient Advocacy

A RECENT DECISION by a California appellate court (*Lois J. Wickline v State of California*) has ruled that third party payors can be held liable for cost containment decisions that deprive patients of needed medical care. It goes on to warn physicians that they too may be held liable if they fail to protest when they comply, against their medical judgment, with the treatment limits imposed by third party payors.

The two parts of this decision, taken together, give substantial new clout to patient advocacy by physicians. First, physicians are encouraged to protest, and protest vigorously for the record, any third party decisions that deny care to a patient if, in the professional opinion of the attending physicians, the care is needed. Then, the ruling gives a new and potentially powerful incentive for a third party payor to seriously consider their action when one or more physicians do protest that what is being done to deny care to a patient is against their professional judgment. The payors are now put at risk as well as the physicians.

Patient advocacy by physicians has long suffered from a lack of clout in a world of health care that has become dominated by economic forces. If this appellate court decision is upheld, third party payors should have a new concern for what is happening to patients who are under their economic control, and a physician's duty to speak up for a patient's interest will be given additional and persuasive legal support. All of this should be healthy, and in patients' interests.

It is to be hoped that the effects of this decision will soon spread beyond the boundaries of California.

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Bentham in a Box—Technology Assessment and the Artificial Heart

JEREMY BENTHAM, the British genius who formulated the philosophical doctrine of utilitarianism, would have been delighted by modern technology assessment. In the late 18th century, Bentham proposed that personal and social life should be governed by a careful calculation of "utilities," the elements of human experience that produce a net balance of happiness over misery. By using a "felicific calculus," the greater happiness of the greater number could be achieved. Modern technology assessment is a variant on the "felicific